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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,626	05/26/2000	Ari Aho	442-009454-US(PAR)	7840

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EXAMINER	
AMINI, JAVID A	
ART UNIT	**PAPER NUMBER**
2672	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/579,626	AHO ET AL.	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 01, 2004 has been entered.

Claim Objections

Claim 12 objected to because of the following informalities: Applicant on page 4 line 5 discloses ".... according to claim 1 .... ", Examiner considered as " .... according to claim 11 .... ". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-16 rejected under 35 U.S.C. 102(b) as being anticipated by Ho 5,757,365.

1. Claim 1.

Ho in fig. 1 item 18 illustrates the step of "an electronic device, which comprises a display element to display information," Ho in col. 2 lines 42-57 discloses that when the data monitor detects the absence of update data for a predetermined period, such as two frames, the system automatically goes into a power down or low power consumption mode in which image data

stored in driver memory 20 are employed to refresh the LCD display and various operations of the VGA/LCD controller itself are shut down to conserve power. Thus the arrangement enables the system to automatically go into its power down mode whenever there is no update data either from the system memory or from input devices. In the following step "wherein said display element has two modes, a full-screen mode use the entire display element to display a first information and a partial screen mode to use a first part of the display element in which partial screen mode second part of the display element is switched off" Ho in fig. 2 illustrates data and control signals are sent from the VGA/LCD controller to a plurality of column drivers 32a-32h and a plurality of row drivers 34a and 34b. The LCD display panel 18, provides a display of 640.times.200 pixels. Column drive pads of the display are divided into 8 sections of 80 columns each. The display panel row driving pads are divided into 2 sections of 100 rows each. Thus, each of row drivers' 34a and 34b drives 200 rows, and each of column drivers 32a-32h drives 80 columns. Each of the drivers 32a-32h and 34a and 34b is a separate single chip, all of which are mounted on the display panel, generally indicated at 16. The row drivers' 34a and 34b are conventional drivers and need not be explained in detail. Ho in fig. 4 illustrates that power save controller 110 detects the absence of memory or I/O write update data for two full frames, and, via a line 120, effectively shuts off the data shift clock XSCL and shuts down graphics controller 92, attributes controller 94, and look-up table 96, also shutting down certain portions of the sequencer 86. See following step "the device comprises: means for switching the device into energy conservation mode by switching the display element to said partial screen mode". Ho also in col. 4 lines 43-68 discloses that LCD interface 84 includes a conventional frame rate modulator 121 that receives the multi-bit grey-scale code. For each group of frames,

equal in number to the number of levels of grey-scale grades denoted by the grey-scale code, the frame rate modulator turns on an individual pixel for a number of frames of such group of frames. The number of frames for which such pixel is turned on is effectively equal to the number denoted by the grey-scale code for that pixel. For example, considering a four bit grey-scale code denoting sixteen levels or grades of intensity of a given pixel, if a fifty percent intensity (level 7) is encoded in the grey-scale code for the pixel, the pixel is turned on for fifty percent (eight) of the (sixteen) frames of the group of frames. If the grey-scale code indicates a twenty-five percent grey-scale level (level 3), that pixel is turned on for only twenty-five percent (four) of the frames. If the grey-scale indicates a zero level, then that pixel is not turned on for any of the frames of the group. If maximum intensity is encoded in the grey-scale code, the individual pixel is turned on for all of the frames of such group. See following step of the claim: "means for controlling the display element during energy conservation mode to display information on said first part; and changing means for changing the position of the first part of the display element on the display element set intervals during energy conservation mode".

2. Claim 2.

The step of "wherein said first part comprises an amount of image particles, and the power consumption of the display element corresponds to the amount of said image particles" Ho in col. 5 lines 17-37 discloses that If there is no memory write or I/O write for at least two frames (as measured by the internal vertical clock signal VRTC on line 90, see FIG. 4), the pixel outputs are first re-mapped from grey-scale to black-and-white. Then, at the second following vertical frame pulse, the panel driver enters self-refresh mode, stopping the pixel shift clock and ensuring that one complete frame of black-and-white pixels is stored in the display RAM 50.

At this point various blocks in the VGA/LCD controller are shut down, such as the graphics controller, the attributes controller, and parts of the LCD interface. In addition, sequencer 96 may also be caused to enter a screen off mode to reduce memory interface activity and to provide maximum CPU bandwidth.

3. Claim 3.

The step of "wherein the changing means is arranged to change the position of the first part in a certain order in certain intervals" Ho in col. 3 lines 17-28 discloses the concept of the claim invention but in different language, that the several column drivers are enabled one at a time, and when enabled each will write 80 bits of data into its memory and read 80 bits from its memory into the appropriate panel driver pads. The individual column driver then goes into a stand-by mode while simultaneously enabling the next adjacent driver so that the 8 column drivers operate one at a time in succession until all 640 columns of the LCD display have been activated.

4. Claim 4.

"wherein the changing means is arranged to randomly change the position of said first part". See rejection of claim 3.

5. Claim 5.

"the changing means arranged to change the position of said first part by scrolling the position on the display element". See rejection of claim 3.

6. Claim 6.

"Wherein said first part comprises a certain amount of rows". Ho in col. 3, lines 1-17 discloses that Column drive pads of the display are divided into 8 sections of 80 columns each. The

display panel row driving pads are divided into 2 sections of 100 rows each. Thus, each of row drivers' 34a and 34b drives 200 rows, and each of column drivers 32a-32h drives 80 columns. Each of the drivers 32a-32h and 34a and 34b is a separate single chip, all of which are mounted on the display panel, generally indicated at 16. The row drivers' 34a and 34b are conventional drivers and need not be explained in detail.

7. Claim 7.

"wherein said first said first part comprises a certain amount of columns". See rejection of claim 6.

8. Claim 9.

"Which device comprises means for ending the energy conserving mode response one the following events: user input, incoming call, an increase in displayed information and a combination of these". Ho in fig. 1 illustrates that Illustrated in FIG. 1 are components of an information processing system, such as a personal computer, including a central processing unit or CPU 10 receiving input data from input equipment generally indicated at 12, which may include a conventional keyboard. The CPU feeds data and control signals to a VGA/LCD controller 14, which stores the data in its video memory 15.

9. Claim 10.

"which device is a mobile station". Ho in col. 1 lines 11-15 discloses as use of portable personal computers spreads they become more sophisticated and more powerful. Additional functions and features are added. Power demands of the portable personal computer, which are always a major concern, increase with increased capabilities.

10. Claims 12, 14 and 16.

See rejection of claim 5.

11. Claims 11, 13, 15

See rejection of claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini

JEFFERY BRIER
PRIMARY EXAMINER